

Sequence Listing

<110> Baker, Kevin  
Botstein, David  
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Filvaroff, Ellen  
Gerritsen, Mary  
Goddard, Audrey  
Godowski, Paul  
Grimaldi, Christopher  
Gurney, Austin  
Hillan, Kenneth  
Kljavin, Ivar  
Napier, Mary  
Roy, Margaret  
Tumas, Daniel  
Wood, William

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<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 12  
gtgctgcccc tccgttctga gaagga 26

<210> 13

<211> 22  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 13  
gcagggtgct caaacaggac ac 22  
  
<210> 14  
<211> 3231  
<212> DNA  
<213> Homo Sapien  
  
<400> 14  
ggcggagcag ccctagccgc caccgtcgct ctgcgagctc tctcgccac 50  
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ccggccggcc atgcagcccc gccgcgccaa ggccggccgt gccgcagctgc 150  
tgcccgcgct ggccctgctg ctgcgtctgc tggagcggg gccccgaggg 200  
agctccctgg ccaaccgggt gcccggcggc cccttgcctg cccggggcc 250  
gtgcggccgcg cagccctgcc ggaatggggg tgggtgcacc tggccgcctg 300  
agccggaccc gcagcacccg gccccggccg gcgagctgg ctacagctgc 350  
acctgccccg cgggatctc cggcccaac tggcagcttg ttgcagatcc 400  
ttgtgccagc aacccttgc accatggcaa ctgcagcagc agcagcagca 450  
gcagcagcga tggctacctc tgcatttgca atgaaggcta tgaaggccc 500  
aactgtgaac aggcaactcc cagtctccca gccactggct ggaccgaatc 550  
catggcaccc cgacagcttc agcctgttcc tgcgtactcag gggctgaca 600  
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aaaacagggc agaaaagtgt agaaatgaaa tggatcaag tggaggtgat 700  
cccagatatt gcctgtggga atgccagttc taacagctct ggggtggcc 750  
gcctggatct ctttgaagtg ccacagaaca cctcagtc当地 gattcggcaa 800  
gatgccactg cttcactgat tttgtctgg aaggtcacgg ccacaggatt 850  
ccaacagtgc tccctcatag atggacgaag tggacccccc cttcaggctt 900  
cagggggact ggttctcctg gaggagatgc tggccttggg gaataatcac 950  
tttattggtt ttgtgaatga ttctgtgact aagtctattg tggcttgcg 1000  
cttaactctg gtggtaagg tcagcacctg tggccgggg gagagtcacg 1050

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100  
gaggcaactt tttcctgtac ctgtgaggag cagtaacgtgg gtactttctg 1150  
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gtattgtatgc aaatgaaaag caagatggga gcaatttcac ctgtgttgc 1250  
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caaactgtga gatccacccca caatggaaatg ccgggcacat ggcggagagc 2000  
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tcagccgcatt tgaataccag ggttcttcca ggccagccata tgaggagttc 2150  
tacaactgcc gcagcatcga cagcgagttc agcaatgcca ttgcattccat 2200  
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gaaatttaaa atgcttagctg ctcaagatgtt ttcagtagaa tatttaagaa 2450  
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ttctttaaaa agtcaagggt tctatattgtt gagtaaatta aatttacatt 3050  
tgagttgtttt gttgctaaga ggttagtaat gtaagagagt actggttcct 3100  
tcagtagtga gtatttctca tagtgcagct ttatttatctt ccaggatgtt 3150  
tttggctgtt tatttgattt gatgtgctt cttctgattt ttgctaattt 3200  
ccaaccatata tgaataaaatg tgatcaagtc a 3231

<210> 15  
<211> 737  
<212> PRT  
<213> Homo Sapien

<400> 15  
Met Gln Pro Arg Arg Ala Gln Ala Pro Gly Ala Gln Leu Leu Pro  
1 5 10 15  
Ala Leu Ala Leu Leu Leu Leu Leu Gly Ala Gly Pro Arg Gly  
20 25 30  
Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro  
35 40 45  
Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr  
50 55 60  
Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu  
65 70 75  
Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn  
80 85 90  
Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His  
95 100 105  
Gly Asn Cys Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

110	115	120
Cys Ile Cys Asn Glu Gly Tyr Glu Gly	Pro Asn Cys Glu Gln Ala	
125	130	135
Leu Pro Ser Leu Pro Ala Thr Gly Trp	Thr Glu Ser Met Ala Pro	
140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr	Gln Glu Pro Asp Lys Ile	
155	160	165
Leu Pro Arg Ser Gln Ala Thr Val Thr	Leu Pro Thr Trp Gln Pro	
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met	Lys Trp Asp Gln Val Glu	
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn	Ala Ser Ser Asn Ser Ser	
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu	Val Pro Gln Asn Thr Ser	
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala	Ser Leu Ile Leu Leu Trp	
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln	Cys Ser Leu Ile Asp Gly	
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser	Gly Leu Val Leu Leu	
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn	His Phe Ile Gly Phe Val	
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val	Ala Leu Arg Leu Thr Leu	
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro	Gly Glu Ser His Ala Asn	
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys	Cys Thr Thr Lys Pro Ser	
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu	Glu Gln Tyr Val Gly Thr	
335	340	345
Phe Cys Glu Glu Tyr Asp Ala Cys Gln	Arg Lys Pro Cys Gln Asn	
350	355	360
Asn Ala Ser Cys Ile Asp Ala Asn Glu	Lys Gln Asp Gly Ser Asn	
365	370	375
Phe Thr Cys Val Cys Leu Pro Gly Tyr	Thr Gly Glu Leu Cys Gln	
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp	Pro Cys Arg Asn Gly Ala	
395	400	405

Thr Cys Ile Ser Ser Leu Ser Gly Phe Thr Cys Gln Cys Pro Glu  
 410 415 420  
 Gly Tyr Phe Gly Ser Ala Cys Glu Glu Lys Val Asp Pro Cys Ala  
 425 430 435  
 Ser Ser Pro Cys Gln Asn Asn Gly Thr Cys Tyr Val Asp Gly Val  
 440 445 450  
 His Phe Thr Cys Asn Cys Ser Pro Gly Phe Thr Gly Pro Thr Cys  
 455 460 465  
 Ala Gln Leu Ile Asp Phe Cys Ala Leu Ser Pro Cys Ala His Gly  
 470 475 480  
 Thr Cys Arg Ser Val Gly Thr Ser Tyr Lys Cys Leu Cys Asp Pro  
 485 490 495  
 Gly Tyr His Gly Leu Tyr Cys Glu Glu Glu Tyr Asn Glu Cys Leu  
 500 505 510  
 Ser Ala Pro Cys Leu Asn Ala Ala Thr Cys Arg Asp Leu Val Asn  
 515 520 525  
 Gly Tyr Glu Cys Val Cys Leu Ala Glu Tyr Lys Gly Thr His Cys  
 530 535 540  
 Glu Leu Tyr Lys Asp Pro Cys Ala Asn Val Ser Cys Leu Asn Gly  
 545 550 555  
 Ala Thr Cys Asp Ser Asp Gly Leu Asn Gly Thr Cys Ile Cys Ala  
 560 565 570  
 Pro Gly Phe Thr Gly Glu Glu Cys Asp Ile Asp Ile Asn Glu Cys  
 575 580 585  
 Asp Ser Asn Pro Cys His His Gly Gly Ser Cys Leu Asp Gln Pro  
 590 595 600  
 Asn Gly Tyr Asn Cys His Cys Pro His Gly Trp Val Gly Ala Asn  
 605 610 615  
 Cys Glu Ile His Leu Gln Trp Lys Ser Gly His Met Ala Glu Ser  
 620 625 630  
 Leu Thr Asn Met Pro Arg His Ser Leu Tyr Ile Ile Ile Gly Ala  
 635 640 645  
 Leu Cys Val Ala Phe Ile Leu Met Leu Ile Ile Leu Ile Val Gly  
 650 655 660  
 Ile Cys Arg Ile Ser Arg Ile Glu Tyr Gln Gly Ser Ser Arg Pro  
 665 670 675  
 Ala Tyr Glu Glu Phe Tyr Asn Cys Arg Ser Ile Asp Ser Glu Phe  
 680 685 690  
 Ser Asn Ala Ile Ala Ser Ile Arg His Ala Arg Phe Gly Lys

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp  
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys  
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagttt aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

cagggaaacag ctagtaccac ctgcacaccc gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggagg tcacggccac aggattccaa cagtgtccc tcatagatgg 50

acgaaaagtgt gaccccccctt tcaggcttcc agggggactg gtcctcctgg 100

aggagatgtc cgccttgggg aataatcaact ttattggttt tgtgaatgtat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggtaaggt 200

cagcacctgt gtgccggggg agagtcaacgc aaatgacttg gagtgttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttccctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gagggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatggagag caatttcacc tgtgtttgcc ttccctgggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

tagggag 508

<210> 19  
<211> 508  
<212> DNA  
<213> Homo Sapien

<400> 19  
ctctggagg tcacggccac aggattccaa cagtgcgtccc tcatacatgg 50  
acgaaagtgt gaccccccctt tcaggcttcc agggggactg gtcctctgg 100  
aggagatgct cgccttgggg aataatcaact ttattggttt tgtgaatgat 150  
tctgtgacta agtctattgt ggcttgcgc ttaactctgg tggtaaggt 200  
cagcacctgt gtgcgggggg agagtcaacgc aaatgacttg gagtggcag 250  
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300  
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350  
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400  
aagatggag caatttcacc tgtgttgcc ttccctggta tactggagag 450  
cttgcacac cgaactgaga ttggagcga cgcacccacac cgaactgaga 500  
tagggag 508

<210> 20  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 20  
ctctggagg tcacggccac agg 23

<210> 21  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 21  
ctcagttcg ttggcaaagc tctc 24

<210> 22  
<211> 69  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cagtgcctcc tcatagatgg acgaaagtgt gaccccccctt tcagggcgaga 50  
gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

gctgagtctg ctgctctgc tgctgctgtt ccagcctgtt acctgtgcct 50  
acaccacgccc agggcccccc agagccctca ccacgctggg cgccccccaga 100  
gcccacacca tgcgggac ctacgctccc tcgaccacac tcagtagtcc 150  
cagcacccag ggctgcaag agcaggcactg ggccctgtatg cgggacttcc 200  
cgctcggttga cggccacaac gacctggccc tggctctaag gcaggtttac 250  
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cagcctggac aggcttagag atggctctgtt gggcgccctt ttctggtag 350  
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gaaaaggtac aggaagaaaa caaatggcaa agccccttgg aggacaagtt 1200  
cccgatgag cagctgagca gttcctgcca ctccgacctc tcacgtctgc 1250  
gtcagagaca gagtctgact tcaggccagg aactcaactga gattcccata 1300  
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aataaatgtt ttggacatag 1520

<210> 24  
<211> 433  
<212> PRT  
<213> Homo Sapien

<400> 24  
Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser  
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Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe  
20 25 30  
Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln  
35 40 45  
Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser  
50 55 60  
Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly  
65 70 75  
Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg  
80 85 90  
Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg  
95 100 105  
Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys  
110 115 120  
Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu  
125 130 135  
Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe  
140 145 150  
Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn  
155 160 165  
Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr  
170 175 180

Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala  
 185 190 195  
 Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser  
 200 205 210  
 Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val  
 215 220 225  
 Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg  
 230 235 240  
 Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly  
 245 250 255  
 Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro  
 260 265 270  
 Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys  
 275 280 285  
 Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp  
 290 295 300  
 Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr  
 305 310 315  
 Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu  
 320 325 330  
 Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg  
 335 340 345  
 Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu  
 350 355 360  
 Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser  
 365 370 375  
 Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln  
 380 385 390  
 Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala  
 395 400 405  
 Lys Trp Ser Val Ser Glu Ser Ser Pro His Met Ala Pro Val Leu  
 410 415 420  
 Ala Val Val Ala Thr Phe Pro Val Leu Ile Leu Trp Leu  
 425 430

<210> 25  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 25  
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<210> 26  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 26  
cgtgatggtg tctttgtcca tggg 24  
  
<210> 27  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 27  
ctccaccaat cccgatgaac ttgg 24  
  
<210> 28  
<211> 50  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 28  
gagcagattg acctcatacg ccgcattgtgt gcctcctatt ctgagctgga 50  
  
<210> 29  
<211> 1416  
<212> DNA  
<213> Homo Sapien  
  
<400> 29  
aaaacctata aatattccgg attattcata ccgtcccacc atcgggcgct 50  
gatccgcggc cgcaattct aaaccaacat gccgggcacc tacgtccct 100  
cgaccacact cagtagtccc agcaccagg gcctgcaaga gcagggcacgg 150  
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200  
ggtcctaagg caggttacc agaaaggct acaggatgtt aacctgcgca 250  
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgta 300  
ggcgcccaagt tctggtcagc ctatgtccca tgccagaccc aggacccggta 350  
tgccctgcgc ctcaccctgg agcagattga cctcatacgc cgcattgtgt 400

cctccttattc tgagctggag cttgtgacct cggctaaagc totgaacgac 450  
 actcagaaat tggcctgcct catcggtgta gagggtggcc actcgctgga 500  
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgttacc 550  
 tgacgctcac ccacacctgc aacacaccct gggcagagag ctccgctaag 600  
 ggcgtccact cttctacaa caacatcagc gggctgactg actttggta 650  
 gaaggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700  
 atgtctcaga tgctgtggca cggcggccc tggaagtgtc acaggcacct 750  
 gtgatcttct cccactcgcc tgccggggt gtgtgcaaca gtgcgtggaa 800  
 tgttcctgtat gacatcctgc agttctgaa gaagaacggt ggcgtcgtga 850  
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 cgtggctgga gtgaggaaga gttcagggt gtccttcgtg gaaacctgct 1100  
 gcgggttttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150  
 gccccttggaa ggacaagttc cggatgagc agctgagcag ttctgcccac 1200  
 tccgacctct cacgtctgcg tcaagagacag agtctgactt cagggcagga 1250  
 actcaactgag attcccatac actggacagc caagttacca gccaagtgg 1300  
 cagtctcaga gtctccccc caccctgaca aaactcacac atgcccaccc 1350  
 tgcccagcac ctgaactcct gggggaccg tcagtcttcc tcttcccccc 1400  
 aaaacccaag gacacc 1416

&lt;210&gt; 30

&lt;211&gt; 446

&lt;212&gt; PRT

&lt;213&gt; Homo Sapien

&lt;400&gt; 30

Met	Pro	Gly	Thr	Tyr	Ala	Pro	Ser	Thr	Thr	Leu	Ser	Ser	Pro	Ser
1														15

Thr	Gln	Gly	Leu	Gln	Glu	Gln	Ala	Arg	Ala	Leu	Met	Arg	Asp	Phe
														30
20														

Pro	Leu	Val	Asp	Gly	His	Asn	Asp	Leu	Pro	Leu	Val	Leu	Arg	Gln
														45
35														

Val	Tyr	Gln	Lys	Gly	Leu	Gln	Asp	Val	Asn	Leu	Arg	Asn	Phe	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50	55	60
Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly		
65	70	75
Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg		
80	85	90
Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg		
95	100	105
Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys		
110	115	120
Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu		
125	130	135
Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe		
140	145	150
Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn		
155	160	165
Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr		
170	175	180
Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala		
185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser		
200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val		
215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg		
230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly		
245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro		
260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys		
275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp		
290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr		
305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu		
320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg		
335	340	345

Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
				350				355					360	
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
				365				370				375		
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
				380				385				390		
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
				395				400				405		
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Pro	Asp	Lys	Thr	His
				410				415				420		
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser
				425				430				435		
Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr				
				440				445						

<210> 31  
 <211> 1790  
 <212> DNA  
 <213> Homo Sapien

<400> 31  
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ggcccgcccg gcggggcggt cgaaccggcgg ggccggagagc cgagctcg 1200  
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atgcagaagt cgccacaagac ccgcacccagg gacgagggga tcctgcccctc 1350  
gggcagacgg ggcacggcga gaggtcctgc cagataagct gttagggctc 1400  
aggccacccct ccctgcccacg tggagacgca gagggccaaac ccaaactggg 1450  
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aaaaaaaaaa aaaaaaaaaa aaaaacaaaaa aaaaaaaaaa 1790

<210> 32  
<211> 422  
<212> PRT  
<213> Homo Sapien

<400> 32  
Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg  
1 5 10 15  
Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly  
20 25 30  
Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro  
35 40 45  
Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys  
50 55 60

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr  
 65 70 75  
 Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val  
 80 85 90  
 Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Asn Leu Asn Gly  
 95 100 105  
 Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp  
 110 115 120  
 Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro  
 125 130 135  
 Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp  
 140 145 150  
 Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu  
 155 160 165  
 His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln  
 170 175 180  
 Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys  
 185 190 195  
 His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp  
 200 205 210  
 Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu  
 215 220 225  
 Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp  
 230 235 240  
 Val His Val Ser Arg Val Gly Leu Glu Asp Gln Leu Ser Val  
 245 250 255  
 Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala  
 260 265 270  
 Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys  
 275 280 285  
 Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly  
 290 295 300  
 Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro  
 305 310 315  
 Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp  
 320 325 330  
 Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly  
 335 340 345  
 Pro Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser

350 355 360  
Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys  
365 370 375  
Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln  
380 385 390  
Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp  
395 400 405  
Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro  
410 415 420  
Ala Arg

<210> 33  
<211> 23  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 33  
cccgcccgac gtgcacgtga gcc 23  
  
<210> 34  
<211> 23  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 34  
tgagccagcc caggaactgc ttg 23  
  
<210> 35  
<211> 50  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 35  
caagtgcgtc gcaaccctt tggcatctat ggctccaaga aagccggat 50  
  
<210> 36  
<211> 1771  
<212> DNA  
<213> Homo Sapien  
  
<400> 36  
cccacgcgtc cgctggtgtt agatcgagca accctctaaa agcagtttag 50

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1  
2  
3  
4  
5  
6  
7  
8  
9

agtggtaaaa aaaaaaaaaa acacaccaaa cgctcgacgc cacaacagg 100  
atgaaatttc ttctggacat cctcctgctt ctcccggtac tgatcgctg 150  
ctccctagag tccttcgtga agcttttat tcctaagagg agaaaatcag 200  
tcaccggcga aatcggtctg attacaggag ctgggcatgg aattgggaga 250  
ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300  
tataaataag catggactgg agggaaacagc tgccaaatgc aagggactgg 350  
gtgccaaggt tcataccctt gtggtagact gcagcaaccg agaagatatt 400  
tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450  
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atcctcagat tgaaaagact tttgaagtta atgtacttgc acatttctgg 550  
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ccccatttct tcaatatcat ttttgaggct ttggcagtct tcatttacta 1150  
ccacttgttc tttagccaaa agctgattac atatgatata aacagagaaa 1200  
tacctttaga ggtgacttta agaaaaatga agaaaaagaa ccaaaatgac 1250  
tttattaaaa taatttccaa gattattgt ggctcacctg aaggcttgc 1300  
aaaatttgc ccataaccgt ttatccaata tatatttttta ttttgattg 1350  
cacttaaatt ttgtataatt tgggtttctt tttctgttct acataaaatc 1400  
agaaaacttca agctctctaa ataaaaatgaa ggactatatac tagtggatt 1450  
tcacaatgaa tatcatgaac tctcaatggg taggttcat cctaccatt 1500

gccactctgt ttcctgagag atacctcaca ttccaatgcc aaacatttct 1550  
gcacaggaa gctagaggtg gatacacgtg ttgcaagtat aaaagcatca 1600  
ctgggattta aggagaattt agagaatgtt cccacaaatg gcagcaataa 1650  
taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750  
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37  
<211> 300  
<212> PRT  
<213> Homo Sapien

<400> 37  
Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Pro Leu Leu Ile  
1 5 10 15  
Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg  
20 25 30  
Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly  
35 40 45  
His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys  
50 55 60  
Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu  
65 70 75  
Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe  
80 85 90  
Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys  
95 100 105  
Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn  
110 115 120  
Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro  
125 130 135  
Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp  
140 145 150  
Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly  
155 160 165  
His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro  
170 175 180  
Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe  
185 190 195  
His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

200	205	210
Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe		
215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu		
230	235	240
Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys		
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu		
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile		
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln		
290	295	300

<210> 38  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 38  
     ggtaaggca gaaattggag atg 23  
  
 <210> 39  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 39  
     atcccatgca tcagcctgtt tacc 24  
  
 <210> 40  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 40  
     gctgggttag tctatacatac agatttggttt gctacacaag atccctcag 48  
  
 <210> 41  
 <211> 1377  
 <212> DNA  
 <213> Homo Sapien

<400> 41  
gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50  
gaaccaggac tggggtgacg gcagggcagg gggcgctgg cccgggagaa 100  
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150  
ccgaaggagg ccatcgaaaa gcccggaggg gggactgcga gaggaccccg 200  
gcgtccgggc tcccggtgcc agcgctatga ggccactct cgtcctgtcg 250  
ctcctggccc tgccggccgg ctgcgcggca ctggacgaca acaagatccc 300  
cagcctctgc ccggggcacc cccgccttcc aggacacgccc ggcacccatg 350  
gcagccaggg cttggccggc cgcgatggcc ggcacggccc cgacggcgcg 400  
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atgttccatcg ccaggtgcct ggggtctact acttcgcgt ccatgccacc 700  
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ggccggcccc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1377

<210> 42

<211> 243  
<212> PRT  
<213> Homo Sapien

<400> 42

Met Arg Pro Leu Leu Val Leu Leu Leu Gly Leu Ala Ala Gly  
1 5 10 15

Ser Pro Pro Leu Asp Asp Asn Lys Ile Pro Ser Leu Cys Pro Gly  
20 25 30

His Pro Gly Leu Pro Gly Thr Pro Gly His His Gly Ser Gln Gly  
35 40 45

Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Asp Gly Ala Pro Gly  
50 55 60

Ala Pro Gly Glu Lys Gly Glu Gly Gly Arg Pro Gly Leu Pro Gly  
65 70 75

Pro Arg Gly Asp Pro Gly Pro Arg Gly Glu Ala Gly Pro Ala Gly  
80 85 90

Pro Thr Gly Pro Ala Gly Glu Cys Ser Val Pro Pro Arg Ser Ala  
95 100 105

Phe Ser Ala Lys Arg Ser Glu Ser Arg Val Pro Pro Pro Ser Asp  
110 115 120

Ala Pro Leu Pro Phe Asp Arg Val Leu Val Asn Glu Gln Gly His  
125 130 135

Tyr Asp Ala Val Thr Gly Lys Phe Thr Cys Gln Val Pro Gly Val  
140 145 150

Tyr Tyr Phe Ala Val His Ala Thr Val Tyr Arg Ala Ser Leu Gln  
155 160 165

Phe Asp Leu Val Lys Asn Gly Glu Ser Ile Ala Ser Phe Phe Gln  
170 175 180

Phe Phe Gly Gly Trp Pro Lys Pro Ala Ser Leu Ser Gly Gly Ala  
185 190 195

Met Val Arg Leu Glu Pro Glu Asp Gln Val Trp Val Gln Val Gly  
200 205 210

Val Gly Asp Tyr Ile Gly Ile Tyr Ala Ser Ile Lys Thr Asp Ser  
215 220 225

Thr Phe Ser Gly Phe Leu Val Tyr Ser Asp Trp His Ser Ser Pro  
230 235 240

Val Phe Ala

<210> 43  
<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
 tacaggccca gtcaggacca gggg 24

<210> 44  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
 agccagcctc gctctcg 18

<210> 45  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
 gtctgcgatc aggtctgg 18

<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 46  
 gaaagaggca atggattcgc 20

<210> 47  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
 gacttacact tgccagcaca gcac 24

<210> 48  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 48  
ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45  
  
<210> 49  
<211> 1876  
<212> DNA  
<213> Homo Sapien  
  
<400> 49  
ctctttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50  
atccagcctg agaaacaaga cgggtggctg agccaggctg tgcaeggagc 100  
acctgacggg cccaacagac ccatgctgca tccagagacc tccctggcc 150  
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tgcagctgct gccccggc ttggcgtct ttgttgaagt ggtcagccta 500  
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gacaatcatc ccctataaga agggtgcctg gtgttcgtc tgcacagcca 750  
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gtccccagga atccttgcg catgagctgc cagaaccatg gacgtctcaa 850  
catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900  
gccaagtgag gtgcagcctg cagtgtgtc acggccggtt ccgggaggag 950  
gagtgctcgt gcgtctgtga catcggtac gggggagccc agtgtgccac 1000  
caaggtgcac ttcccttcc acacctgtga cctgaggatc gacggagact 1050  
gcttcatggt gtcttcagag gcagacaccc attacagagc caggatgaaa 1100  
tgtcagagga aaggcggggt gctggcccag atcaagagcc agaaagtgc 1150

ggacatcctc gccttctatc tggccgcct ggagaccacc aacgaggtga 1200  
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cagtttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350  
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ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600  
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gaggccagtg agggccaggg agttagtggt agaagaagct gggcccttc 1700  
gcctgcttt gattggaaag atgggcttca attagatggc gaaggagagg 1750  
acaccgcccag tggtccaaaa aggctgtct cttccacctg gcccagaccc 1800  
tgtgggcag cggagcttcc ctgtggcatg aaccccacgg ggtattaaat 1850  
tatgaatcag ctgaaaaaaaaaaaaa 1876

<210> 50  
<211> 455  
<212> PRT  
<213> Homo Sapien

<400> 50  
Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala  
1 5 10 15  
Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro  
20 25 30  
Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg  
35 40 45  
Lys Glu Ser Phe Leu Leu Ser Leu His Asn Arg Leu Arg Ser  
50 55 60  
Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser  
65 70 75  
Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly  
80 85 90  
Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln  
95 100 105  
Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala Glu Gly Gln Arg Tyr Ser		
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn Ala Thr Cys Thr His Tyr		
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser Gln Leu Gly Cys Gly Arg		
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala Ile Glu Ala Phe Val Cys		
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu Val Asn Gly Lys Thr Ile		
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys Ser Leu Cys Thr Ala Ser		
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp His Ala Gly Gly Leu Cys		
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met Ser Cys Gln Asn His Gly		
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys His Cys Pro Pro Gly Tyr		
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys Ser Leu Gln Cys Val His		
260	265	270
Gly Arg Phe Arg Glu Glu Cys Ser Cys Val Cys Asp Ile Gly		
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys Val His Phe Pro Phe His		
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp Cys Phe Met Val Ser Ser		
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg Met Lys Cys Gln Arg Lys		
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser Gin Lys Val Gln Asp Ile		
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu Thr Thr Asn Glu Val Thr		
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe Trp Ile Gly Leu Thr Tyr		
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp Ala Thr Gly Glu His Gln		
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln Pro Asp Asn His Gly Leu		
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu  
410 415 420  
Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr  
425 430 435  
Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg  
440 445 450  
Trp Gly Pro Gly Ser  
455

<210> 51  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 51  
aggaacttct ggatcgggct cacc 24

<210> 52  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 52  
gggtctgggc caggtggaag agag 24

<210> 53  
<211> 45  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe

<400> 53  
gccaaaggact cttccgctg ggccacaggg gaggcaccagg cttc 45

<210> 54  
<211> 2331  
<212> DNA  
<213> Homo Sapien  
  
<400> 54

cgacgcgtg ggctgggc tgcaaagct gtcccgccgg gtcccccggc 50  
gtcccgccggc ctgcggccgc catgctcctg ctgctgggc tgtgcctggg 100  
gctgtccctg tgtgtgggtt cgcaggaaga ggccgcagagc tggggccact 150  
cttcggagca ggatggactc agggtcccga ggcaagtcag actgttgcag 200

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctaccat 250  
catttccgt tatgccttca ctacggttc ctgcagaatg ctgaacagag 300  
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350  
ttcatcacca acttcactat gcttattgga gacaagggtgt atcagggcga 400  
aattacagag agagaaaaga agagtggtga taggtaaaa gagaaaagga 450  
ataaaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500  
tctgcagtga ttcccagcaa ggacaaagcc gccttttcc tgagttatga 550  
ggagcttctg cagaggcgcc tggcaagta cgacacagc atcagcgtgc 600  
ggccccagca gctgtccggg aggctgagcg tggacgtgaa tattctggag 650  
agcgcgggca tcgcattccct ggaggtgctg ccgttcaca acagcaggca 700  
gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccattactg 750  
tcattaacca aaatgaaaca tttgccaaca taattttaa acctactgta 800  
gtacaacaag ccaggattgc ccagaatgga attttggag actttatcat 850  
tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900  
atggctattt tgtgcactac tttgctccta aagaccttcc tcctttaccc 950  
aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tggaaaccaa 1000  
actccggcag accaaggatg ccctttcac aatttccat gaccccgac 1050  
cccaggaccc ttccagtatc attggatttt ccaaccggat caaagtatgg 1100  
aaggaccact tgatatcagt cactccagac agcatcaggg atggaaagt 1150  
gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200  
tgcagagggc catcaggctc ctcaacaagt acgtggccca cagtggcatt 1250  
ggagaccgga gcgtgtccct catcgcttc ctgacggatg ggaagccac 1300  
ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350  
cccaggaccc agtctgcatac ttccaccattt gcatcgccaa cgacgtggac 1400  
ttcaggctgc tggagaaact gtcgctggag aactgtggcc tcacacggcg 1450  
cgtgcacgag gaggaggacg caggctcgca gtcacatcggtt ttctacgatg 1500  
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ggagatcatc attgcgggga agctggtgga caggaagctg gatcacctgc 1650

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700  
gatgtgcctg tgccgcctca gaaggcaggg aaagatgtca caggaagccc 1750  
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800  
ggagctacct caccacaaag gagctgctga gctcctggct gcaaagtgac 1850  
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900  
gagctaccgc ttccctcaccc ccttcaccc catgaagctg agggggccgg 1950  
tcccacgcat ggtggcctg gaggaggccc acggcatgtc ggctgccatg 2000  
ggaccgaaac cgggtggtgca gagcgtgcga ggagctggca cgcagccagg 2050  
acctttgctc aagaagccaa actccgtcaa aaaaaaaacaa aacaaaacaa 2100  
aaaaaaagaca tgggagagat ggtgttttc ctctccacca cctgggata 2150  
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200  
ccatgtctgc tggcacctt atcttgacc tcccagcctc cagaactgtg 2250  
agaaataaaat gtgtttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55  
<211> 694  
<212> PRT  
<213> Homo Sapien

<400> 55  
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val  
1 5 10 15  
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln  
20 25 30  
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu  
35 40 45  
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile  
50 55 60  
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn  
65 70 75  
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro  
80 85 90  
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys  
95 100 105  
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp  
110 115 120

Arg Val Lys Glu Lys Arg Asn Lys Thr Thr Glu Glu Asn Gly Glu  
 125 130 135  
 Lys Gly Thr Glu Ile Phe Arg Ala Ser Ala Val Ile Pro Ser Lys  
 140 145 150  
 Asp Lys Ala Ala Phe Phe Leu Ser Tyr Glu Glu Leu Leu Gln Arg  
 155 160 165  
 Arg Leu Gly Lys Tyr Glu His Ser Ile Ser Val Arg Pro Gln Gln  
 170 175 180  
 Leu Ser Gly Arg Leu Ser Val Asp Val Asn Ile Leu Glu Ser Ala  
 185 190 195  
 Gly Ile Ala Ser Leu Glu Val Leu Pro Leu His Asn Ser Arg Gln  
 200 205 210  
 Arg Gly Ser Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser  
 215 220 225  
 Thr Val Ile Asn Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys  
 230 235 240  
 Pro Thr Val Val Gln Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu  
 245 250 255  
 Gly Asp Phe Ile Ile Arg Tyr Asp Val Asn Arg Glu Gln Ser Ile  
 260 265 270  
 Gly Asp Ile Gln Val Leu Asn Gly Tyr Phe Val His Tyr Phe Ala  
 275 280 285  
 Pro Lys Asp Leu Pro Pro Leu Pro Lys Asn Val Val Phe Val Leu  
 290 295 300  
 Asp Ser Ser Ala Ser Met Val Gly Thr Lys Leu Arg Gln Thr Lys  
 305 310 315  
 Asp Ala Leu Phe Thr Ile Leu His Asp Leu Arg Pro Gln Asp Arg  
 320 325 330  
 Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys Val Trp Lys Asp  
 335 340 345  
 His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp Gly Lys Val  
 350 355 360  
 Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile Asn Gly  
 365 370 375  
 Ala Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala His  
 380 385 390  
 Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr  
 395 400 405  
 Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr		
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu		
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu		
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr		
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val		
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser		
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His		
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile		
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp		
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr		
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu		
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg		
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu		
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met		
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro		
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly		
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys		
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His		
680	685	690
Leu Gly Ile Arg		

<210> 56  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 56  
gtgggaacca aactccggca gacc 24

<210> 57  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 57  
cacatcgagc gtctctgg 18

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 58  
agccgctcct tctccggttc atcg 24

<210> 59  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 59  
tggaaggacc acttgatatac agtcactcca gacagcatca gggatggg 48

<210> 60  
<211> 1413  
<212> DNA  
<213> Homo Sapien

<400> 60  
cggacgcgtg ggggcccgca catggcgagt gtatgtctgc cgagcggatc 50  
ccagtgtcg gccccggccggc cggccggggc gcctccgggg ctccggcttc 100  
tgctgttgct cttctccgccc gccccactga tccccacagg tggatggcag 150  
aatctgttta cgaaagacgt gacagtgtatc gagggagagg ttgcgaccat 200

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250  
ccaacaggca gaccattat ttcagggact tcaggcctt gaaggacagc 300  
agtttcagt tgctgaattt ttcttagcagt gaactcaaag tatcattgac 350  
aacgtctca atttctgatg aaggaagata ctttgccag ctctataccg 400  
atccccaca ggaaagttac accaccatca cagtcctggc cccaccacgt 450  
aatctgatga tcgatatacca gaaagacact gcgggtgaaag gtgaggagat 500  
tgaagtcaac tgcaactgcta tggccagcaa gccagccacg actatcaggt 550  
ggttcaaagg gaacacagag ctaaaaggca aatcgaggt ggaagagtgg 600  
tcagacatgt acactgtgac cagtcagctg atgctgaagg tgcacaagga 650  
ggacgatggg gtcccagtga tctgccaggt ggagcaccct gcggtcactg 700  
gaaacctgca gacccagcgg tatctagaag tacagtataa gcctcaagtg 750  
cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800  
gcttgagttt acatgtgaag ccatacgaa gccccagcgt gtgatggtaa 850  
cttgggttag agtcgatgtat gaaatgcctc aacacgcccgt actgtctggg 900  
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataccg 950  
ctgtgaagct tcaaacatag tggggaaagc tcactcgat tatatgtgt 1000  
atgtatacga tccccccaca actatccctc ctcccacaac aaccaccacc 1050  
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100  
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150  
gcgtcggtgc ggtgggtgtt ttcgcctatgc tgtgcttgc catcattctg 1200  
gggcgcatttt ttgccagaca taaaggtaa tacttcactc atgaagccaa 1250  
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300  
gaggacagaa caactccgaa gaaaagaaaag agtacttcat ctagatcagc 1350  
ctttttgtttt caatgaggttgc tccaaactggc cctatttaga tgataaagag 1400  
acagtgatataatg 1413

<210> 61  
<211> 440  
<212> PRT  
<213> Homo Sapiens

<400> 61  
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala  
1 5 10 15

Ala Ala Ala Ala Ala Pro Pro Gly Leu Arg Leu Leu Leu Leu  
 20 25 30  
 Phe Ser Ala Ala Ala Leu Ile Pro Thr Gly Asp Gly Gln Asn Leu  
 35 40 45  
 Phe Thr Lys Asp Val Thr Val Ile Glu Gly Glu Val Ala Thr Ile  
 50 55 60  
 Ser Cys Gln Val Asn Lys Ser Asp Asp Ser Val Ile Gln Leu Leu  
 65 70 75  
 Asn Pro Asn Arg Gln Thr Ile Tyr Phe Arg Asp Phe Arg Pro Leu  
 80 85 90  
 Lys Asp Ser Arg Phe Gln Leu Leu Asn Phe Ser Ser Ser Glu Leu  
 95 100 105  
 Lys Val Ser Leu Thr Asn Val Ser Ile Ser Asp Glu Gly Arg Tyr  
 110 115 120  
 Phe Cys Gln Leu Tyr Thr Asp Pro Pro Gln Glu Ser Tyr Thr Thr  
 125 130 135  
 Ile Thr Val Leu Val Pro Pro Arg Asn Leu Met Ile Asp Ile Gln  
 140 145 150  
 Lys Asp Thr Ala Val Glu Gly Glu Glu Ile Glu Val Asn Cys Thr  
 155 160 165  
 Ala Met Ala Ser Lys Pro Ala Thr Thr Ile Arg Trp Phe Lys Gly  
 170 175 180  
 Asn Thr Glu Leu Lys Gly Lys Ser Glu Val Glu Glu Trp Ser Asp  
 185 190 195  
 Met Tyr Thr Val Thr Ser Gln Leu Met Leu Lys Val His Lys Glu  
 200 205 210  
 Asp Asp Gly Val Pro Val Ile Cys Gln Val Glu His Pro Ala Val  
 215 220 225  
 Thr Gly Asn Leu Gln Thr Gln Arg Tyr Leu Glu Val Gln Tyr Lys  
 230 235 240  
 Pro Gln Val His Ile Gln Met Thr Tyr Pro Leu Gln Gly Leu Thr  
 245 250 255  
 Arg Glu Gly Asp Ala Leu Glu Leu Thr Cys Glu Ala Ile Gly Lys  
 260 265 270  
 Pro Gln Pro Val Met Val Thr Trp Val Arg Val Asp Asp Glu Met  
 275 280 285  
 Pro Gln His Ala Val Leu Ser Gly Pro Asn Leu Phe Ile Asn Asn  
 290 295 300  
 Leu Asn Lys Thr Asp Asn Gly Thr Tyr Arg Cys Glu Ala Ser Asn

Ile Val Gly Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp  
305 320 325 330  
Pro Pro Thr Thr Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr Thr  
335 340 345  
Thr Thr Thr Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg  
350 355 360  
Ala Gly Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile  
365 370 375  
Gly Gly Val Val Ala Val Val Val Phe Ala Met Leu Cys Leu Leu  
380 385 390  
Ile Ile Leu Gly Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe  
395 400 405  
Thr His Glu Ala Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr  
410 415 420  
Ala Ile Ile Asn Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys  
425 430 435  
Lys Glu Tyr Phe Ile  
440  
210> 62  
211> 24  
212> DNA  
213> Artificial Sequence  
220>  
223> Synthetic oligonucleotide probe  
400> 62  
ggcttctgct gttgctttc tccg 24  
210> 63  
211> 20  
212> DNA  
213> Artificial Sequence  
220>  
223> Synthetic oligonucleotide probe  
400> 63  
gtacactgtg accagtcagc 20  
210> 64  
211> 20  
212> DNA  
213> Artificial Sequence  
220>  
223> Synthetic oligonucleotide probe

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<400> 64  
atcatcacag attcccgagc 20  
  
<210> 65  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 65  
ttcaatctcc tcaccttcca ccgc 24  
  
<210> 66  
<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 66  
atagctgtgt ctgcgtctgc tgcg 24  
  
<210> 67  
<211> 50  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 67  
cgcggcactg atccccacag gtgatggca gaatctgttt acgaaagacg 50  
  
<210> 68  
<211> 2555  
<212> DNA  
<213> Homo Sapien  
  
<400> 68  
ggggcgggtg gacgcccact cgaacgcagt tgcttcggga cccaggaccc 50  
cctcggggccc gacccgcccag gaaagactga ggccgcggcc tgccccggcc 100  
ggctccctgc gccgcggcccg cctccggga cagaagatgt gctccagggt 150  
ccctctgctg ctgcccgtgc tctgtact ggccctgggg cctgggggtgc 200  
agggctgccc atccggctgc cagtgccagcc agccacacagac agtcttctgc 250  
actgccccgcc aggggaccac ggtgccccga gacgtgccac ccgacacggc 300  
ggggctgtac gtctttgaga acggcatcac catgctcgac gcaaggcagct 350  
ttgccggcct gcccggcctg cagctcctgg acctgtcaca gaaccagatc 400

gccagcctgc gcctccccg cctgctgctg ctggacctca gccacaacag 450  
cctcctggcc ctggagcccc gcacccctgga cactgccaac gtggaggcgc 500  
tgcggctggc tggctgggg ctgcagcagc tggacgaggg gctttcagc 550  
cgcttgcga acctccacga cctggatgtg tccgacaacc agctggagcg 600  
agtgccaccc gtgatccgag gcctccgggg cctgacgcgc ctgcggctgg 650  
ccggcaacac cgcattgcc cagctgcggc ccgaggaccc ggccggctg 700  
gctgccctgc aggagctgga tgtgagcaac ctaaggctgc aggccctgcc 750  
tggcgcaccc tcgggcctct tccccccctt gggctgctg gcagctgccc 800  
gcaacccctt caactgcgtg tgccccctga gctggtttgg cccctgggtg 850  
cgcgagagcc acgtcacact ggccagccct gaggagacgc gctgccactt 900  
cccgcccaag aacgctggcc ggctgctctt ggagcttgac tacgcccact 950  
ttggctgccc agccaccacc accacagcca cagtgcaccc cacgaggccc 1000  
gtggcgggg agccacacgc cttgtttctt agcttggctc ctacctggct 1050  
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caccgactgt agggcctgtc cccagggccc aggactgccc accgtccacc 1150  
tgcctcaatg gggcacatg ccacccctggg acacggcacc acctggcgtg 1200  
cttgcggccc gaaggcttca cgggcctgta ctgtgagagc cagatggggc 1250  
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ctgaccctgg gcatcgagcc ggtgagcccc acctccctgc gctggggct 1350  
gcagcgctac ctccagggggaa gtcctgtca gtcaggagc ctccgtctca 1400  
cctatcgcaa cctatcgggc cctgataagc ggctgggtgac gctgcgactg 1450  
cctgcctcgc tcgctgagta cacggtcacc cagctgcggc ccaacgcccac 1500  
ttactccgtc tgtgtcatgc ctttggggcc cgggcgggtg ccggagggcg 1550  
aggaggcctg cggggaggcc catacaccggc cagccgtcca ctccaaccac 1600  
gccccagtca cccaggcccc cgagggcaac ctggcgctcc tcattgcgcc 1650  
cgccctggcc gcggtgctcc tggccgcgtc ggctgcgggtg gggcagccct 1700  
actgtgtgcg gccccggccgg gccatggcag cagcgggtca ggacaaagg 1750  
caggtggggc caggggctgg gcccctggaa ctggaggag tgaaggtccc 1800  
cttggagccca ggcccgaagg caacagaggg cgggtggagag gcccctgccc 1850

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900  
cagtcacccc tcacgcaaa gcccataatc taagccagag agagacaggg 1950  
cagctgggc cgggtctca gccagtgaga tggccagccc cctcctgctg 2000  
ccacaccacg taagttctca gtcccaacct cggggatgtg tgcagacagg 2050  
gctgtgtgac cacagctggg ccctgttccc tctggacctc ggtctctca 2100  
tctgtgagat gctgtggccc agctgacgag ccctaacgac cccagaaccg 2150  
agtgcctatg aggacagtgt cccgcctgcc ctccgcaacg tgcagtcct 2200  
gggcacggcg ggcctgcca tgtgctggta acgcatgcct ggcctgtct 2250  
gggcctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300  
gaaagagcag agggagagcg gtagggcggc tgtgtgactc tagtcttggc 2350  
cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttagaa 2400  
catgtttgc tttttaaaaa tatatatata tttataagag atcctttccc 2450  
atttattctg ggaagatgtt tttcaaactc agagacaagg actttggttt 2500  
ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaaa 2550  
aaaaaa 2555

<210> 69  
<211> 598  
<212> PRT  
<213> Homo Sapien

<400> 69  
Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu  
1 5 10 15  
Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
20 25 30  
Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
35 40 45  
Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
50 55 60  
Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu  
65 70 75  
Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
80 85 90  
Leu Arg Leu Pro Arg Leu Leu Leu Asp Leu Ser His Asn Ser  
95 100 105  
Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110	115	120
Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly		
125	130	135
Leu Phe Ser Arg Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp		
140	145	150
Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly		
155	160	165
Leu Thr Arg Leu Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu		
170	175	180
Arg Pro Glu Asp Leu Ala Gly Leu Ala Ala Leu Gln Glu Leu Asp		
185	190	195
Val Ser Asn Leu Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly		
200	205	210
Leu Phe Pro Arg Leu Arg Leu Leu Ala Ala Ala Arg Asn Pro Phe		
215	220	225
Asn Cys Val Cys Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu		
230	235	240
Ser His Val Thr Leu Ala Ser Pro Glu Glu Thr Arg Cys His Phe		
245	250	255
Pro Pro Lys Asn Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala		
260	265	270
Asp Phe Gly Cys Pro Ala Thr Thr Thr Ala Thr Val Pro Thr		
275	280	285
Thr Arg Pro Val Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu		
290	295	300
Ala Pro Thr Trp Leu Ser Pro Thr Ala Pro Ala Thr Glu Ala Pro		
305	310	315
Ser Pro Pro Ser Thr Ala Pro Pro Thr Val Gly Pro Val Pro Gln		
320	325	330
Pro Gln Asp Cys Pro Pro Ser Thr Cys Leu Asn Gly Gly Thr Cys		
335	340	345
His Leu Gly Thr Arg His His Leu Ala Cys Leu Cys Pro Glu Gly		
350	355	360
Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
365	370	375
Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr		
380	385	390
Leu Gly Ile Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu		
395	400	405

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg  
410 415 420

Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr  
425 430 435

Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu  
440 445 450

Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro  
455 460 465

Gly Arg Val Pro Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr  
470 475 480

Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg  
485 490 495

Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val  
500 505 510

Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg  
515 520 525

Arg Gly Arg Ala Met Ala Ala Ala Gln Asp Lys Gly Gln Val  
530 535 540

Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro  
545 550 555

Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Glu Ala Leu  
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Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly  
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Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile  
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<211> 22

<212> DNA

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<223> Synthetic oligonucleotide probe

<400> 70

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<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<400> 71  
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<213> Artificial Sequence  
  
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<223> Synthetic oligonucleotide probe  
  
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<400> 73  
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<212> DNA  
<213> Homo Sapien  
  
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<210> 76

<211> 250

<212> PRT

<213> Homo Sapien

<400> 76

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Gly	Asn	Met	Gly	Gly	Pro	Val	Arg	Glu	Pro	Ala	Leu	Ser	Val	Ala
														30
20														

Leu	Trp	Leu	Ser	Trp	Gly	Ala	Ala	Leu	Gly	Ala	Val	Ala	Cys	Ala
														45
35														

Met	Ala	Leu	Leu	Thr	Gln	Gln	Thr	Glu	Leu	Gln	Ser	Leu	Arg	Arg
														60
50														

Glu	Val	Ser	Arg	Leu	Gln	Gly	Thr	Gly	Gly	Pro	Ser	Gln	Asn	Gly
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65														

Glu	Gly	Tyr	Pro	Trp	Gln	Ser	Leu	Pro	Glu	Gln	Ser	Ser	Asp	Ala
														90
80														

Leu	Glu	Ala	Trp	Glu	Asn	Gly	Glu	Arg	Ser	Arg	Lys	Arg	Arg	Ala
														105
95														

Val	Leu	Thr	Gln	Lys	Lys	Lys	Gln	His	Ser	Val	Leu	His	Leu	
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110														

Val Pro Ile Asn Ala Thr Ser Lys Asp Asp Ser Asp Val Thr Glu  
125 130 135

Val Met Trp Gln Pro Ala Leu Arg Arg Gly Arg Gly Leu Gln Ala  
140 145 150

Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala Gly Val Tyr Leu Leu  
155 160 165

Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met Gly Gln  
170 175 180

Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe Arg  
185 190 195

Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser  
200 205 210

Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu  
215 220 225

Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro  
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His Gly Thr Phe Leu Gly Phe Val Lys Leu  
245 250

<210> 77

<211> 2849

<212> DNA

<213> Homo Sapien

<400> 77

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tgcgttcctc cggaagacct tttccctgc tctgtttct tcaccgagtc 200

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<210> 78
<211> 281
<212> PRT
<213> Homo Sapien

<400> 78
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Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
 20          25          30

Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
 35          40          45

Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
 50          55          60

Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
 65          70          75

Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
 80          85          90

Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
 95          100         105

Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

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110	115	120
Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly		
125	130	135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val		
140	145	150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val		
155	160	165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met		
170	175	180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe		
185	190	195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His		
200	205	210
Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val		
215	220	225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu		
230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg		
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe		
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro		
275	280	

<210> 79  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 79  
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<210> 80  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 80  
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<210> 81

<211> 45  
<212> DNA  
<213> Artificial Sequence  
  
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<223> Synthetic oligonucleotide probe  
  
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<212> DNA  
<213> Homo Sapien  
  
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<211> 431  
<212> PRT  
<213> Homo Sapien

<400> 83  
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Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu  
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 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu  
 35 40 45  
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln  
 50 55 60  
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly  
 65 70 75  
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala  
 80 85 90  
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala  
 95 100 105  
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile  
 110 115 120  
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu  
 125 130 135  
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val  
 140 145 150  
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp  
 155 160 165  
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp  
 170 175 180  
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu  
 185 190 195  
 Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser  
 200 205 210  
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala  
 215 220 225  
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala  
 230 235 240  
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr  
 245 250 255  
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro  
 260 265 270  
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr  
 275 280 285  
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr  
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 Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly

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Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn		
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg		
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn		
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly		
395	400	405
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410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

&lt;210&gt; 84

&lt;211&gt; 30

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 84

agggaggatt atccttgacc tttgaagacc 30

&lt;210&gt; 85

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 85

gaagcaagtg cccagctc 18

&lt;210&gt; 86

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 86

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<213> Homo Sapien  
  
<400> 90  
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Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala  
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Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val  
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